

ABSTRACT

An improved chain motor drive controller is provided for a chain hoist. The system employs a position encoder including a position sensor located within the casing of the chain hoist to producing encoded electrical position signals. A motor pulley is mounted on the chain motor rotary drive shaft and is coupled by a cogged belt to rotate an encoder pulley that is mounted on the same shaft as the position sensor. A mechanical coupling is thereby provided entirely within the casing of the chain hoist to transmit rotary motion from the rotary drive shaft directly to the position sensor. Also, tracking circuitry, likewise located entirely within the chain hoist casing, receives electrically encoded destination signals and compares these to signals from the position sensor. The tracking circuitry accelerates rotation of the chain motor drive shaft starting from a stationary condition and decelerates rotation of the chain motor drive shaft as the differences between the encoded position signals and the encoded destination signals approach zero.